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THORACIC AND ABDOMINAL ANEURISMS OF THE AORTA.

[Read before the Boston Society for Medical Improvement, and communicated for the Boston Medical and Surgical Journal.]

By J. N. BORLAND, M.D.

THE patient was a sailor, 36 years old, born in Finland. He entered the Boston City Hospital, December 8th, 1865, and reported that two years previously he had general dropsy, and was cured in two months. With the exception of an attack of gonorrhœa eighteen months ago, he continued well until three months before entrance, when he took a severe cold after exposure, and had cold in his head, cough, and pain in cardiac region. These symptoms left him in two weeks, and since then he has had constant pain in his hips, and in the lower part of his back, but never above the crista ili. Has had no return of the dropsy. Has not been confined to the bed.

General appearance thin and anæmic. Pulse 60, good. Sounds of heart normal. Tongue has a thick brown coat. No appetite or dyspepsia. Bowels are commonly constipated. Urine less in quantity than natural, and high colored; specific gravity 1.020; reaction acid, albuminous, and under the microscope showing epithelial scales and pus corpuscles. Old cicatrices of buboes in groins. No enlargement of glands, nodes or other indications of constitutional affection from syphilis.

He was ordered fluid extract of buchu, and fomentations to vesical region at night, with a pill containing ferri protocarb. gr. iij., pulv. aloës, gr. ss., every four hours, and house diet.

He began soon to pass much of his time in bed, from weakness and pain felt in his abdomen when walking. When in bed and lying on his back this pain was not felt, but it prevented his resting on his side.

On December 11th, without apparent cause, the pain through the pelvis being relieved, he began to vomit watery fluid, and the tendency to this lasted for five days. On the 13th, during the morning visit, he suddenly had a very severe epileptic convulsion, which gradually subsided, with consciousness slowly returning and fully re-

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established in about four hours. This was unaccompanied by any other cerebral symptoms; and he afterwards stated that he was sure he never had previously had any such convulsion, nor was there afterwards any tendency to repetition.

Dec. 17th.—The buchu was stopped.

19th.—No albumen or pus was discovered on examination of the urine.

20th.—Felt pain in vicinity of heart when standing up.

21st.—Pulse 96. Complained of severe pain in left back and side of thorax, especially while standing up. Nothing abnormal was discovered upon a careful physical examination. The iron pill was omitted, and he was ordered a solution containing five grains of iodide of potassium three times daily.

27th.—The patient showed no improvement, the anæmia seemed increasing, and he complained of weakness; his pulse was quick and small, varying from 92 to 104. At times he felt no pain, but at others he complained of pain in his left chest and in his abdomen, but of a vague character, of uncertain duration and intensity, and referable to no fixed spot. His nights were wakeful. I omitted the iodide of potassium and ordered him ten drops of tincture of chloride of iron three times daily, and whiskey half an ounce three times daily.

29th.—Pulse 92, small, weak. Had four hours sleep after morphia. Nothing abnormal could be discovered in sounds of heart or lungs.

Jan. 2d.—He could not sit up without increasing his pain, and walking produced dizziness.

4th.—Pain is only felt in the latter part of the day and at night, and then in the region of the stomach; the abdomen was flat, soft and tympanitic, nothing unusual being detected on exploration. A solution containing five grains of citrate of iron and quinine was substituted for the tincture of the chloride of iron.

5th.—Pulse 72, counted with difficulty. He was ordered frequent supplies of beef-tea.

From this time until Jan. 27th, the patient continued to slowly depreciate in condition, with some days of relief, but always looking anæmic, growing thinner, feeling weak, and with vague pains, sometimes felt in one place, sometimes in another, occasionally vomiting, and never responding to stimulus, various remedies being used, but all equally without benefit.

On the 27th, the record states that the patient vomited on the evening before, was afterwards quiet but wakeful till midnight, then seized with severe and sudden pain, described as shooting from the right hypochondrium to the left ilium, and followed by fainting. To-day, he looks sallow, thin and weak; lips blue. Abdominal pain gone, but soreness remaining. One dejection in night after disturbance. Pulse 96. Great thirst.

Jan. 30th.—Tongue swollen, sore, stiff, covered with a thick, dirty-

white, moist coat. Lips swollen and aphthous. Some stiffness about palate on swallowing. Examination of urine shows only slight increase in specific gravity, and the presence of albumen, but no casts.

Feb. 1st.—“Yesterday P.M. the patient was apparently moribund, insensible, pulseless, with cold sweats. This condition was preceded by an access of intense abdominal pain, shooting down the right thigh; he rallied, however, under liberal administration of brandy. Catheter, passed this morning, drew off a small quantity of clear urine. Abdomen full and tympanitic. Pulse 100, steady. Smell of breath and body cadaverous.”

At this time he assumed a position on his right side, which he retained until his death. He took no food, except drinking freely of brandy and water. No marked change took place, his pulse retaining its character, small, thready, rapid, 96 to 112, until Feb. 4th, when, reaching after his brandy, he suddenly died.

The impossibility in this case of forming any accurate diagnosis, rendered the autopsy one of marked interest as offering the solution to a difficult problem. I could only recognize the fact that grave disease existed somewhere. The steadily unfavorable progress in spite of nourishing and stimulating treatment, and the non-response to stimulation, showed it plainly. The increasing emaciation; the pale and anxious countenance, with its leaden hue, pinched features and livid lips; the frequent pulse; the varying pains; the occasional nausea and dyspepsia; all suggested to my mind that the disease might be malignant, yet where located or of what organ I could not tell. The healthy-sounding heart and lungs, the non-detection of a tumor of any sort, left me entirely in the dark; and the result proved that a patient may remain for weeks in a hospital, under constant inspection, and be frequently visited by numbers of experienced and skilful physicians, and may finally die of aneurism without the character of the disease being suspected; and also may live even for days after rupture and large effusion of blood, as in this case, where rupture of the abdominal sac took place undoubtedly on the afternoon of January 31, death not occurring till February 4, at 4, A.M.

Autopsy, Feb. 5th, 1866, by Dr. SWAN, Pathologist to the Hospital. Body stiff from cold; somewhat emaciated; distinctly jaundiced.

The heart was healthy, not large. The pericardium contained upwards of one ounce of serum. No fluid in the pleural cavities; but both lungs were slightly bound, in places, to the wall of the chest by old firm bands of lymph, the left being also firmly attached to the diaphragm. The apices of both lungs contained a few hard tubercles.

There was marked but not excessive atheromatous disease of the aorta for most of its extent. Just beyond the arch, its upper limits about one inch and five eighths from the subclavian, was a rather abrupt and irregular opening about an inch in transverse and rather less in longitudinal diameter, communicating with a somewhat flattened aneurismal cavity, about two inches wide and long, with the walls

of which the inner arterial coat seemed to some extent continuous. The sac contained coagula, which were broken up by the process of removal, it having been firmly adherent over the left side of the body of a vertebra and over two contiguous ribs. These bony surfaces were rough and carious, without being deeply eroded. At the side of the opening the aorta was dilated into a distinct, narrow, rather shallow pouch an inch and a quarter long, and lined at the bottom with a thin layer of firmly adhering old coagulum.

The position of the abdominal organs was for the most part normal; but the stomach was curved rather sharply and the pyloric end seemed pushed to the left of its usual situation.

About two pints of serum were found in the abdominal cavity; and lying on the upper surfaces of the liver and stomach, and extending over the flexure and in front of the latter organ, were thick sheets of black coagulated blood, recent, but sufficiently firm to be removed entire. The same filled the spaces of the pelvic cavity.

In the right lumbar region was an irregularly roundish mass of recent black coagulum, as it seemed to be, measuring vertically six or seven, and laterally five inches. It was quite firm and consistent, and was in part apparently covered by thin membrane. The cœcum and adjacent portion of colon were rather firmly attached to its anterior and lower surface, and a portion of the coagulum evidently lay between the folds of the meso-cœcum and perhaps of the meso-colon. The right kidney and supra-renal capsule lay deeply enveloped in the mass, and the former, when removed, after section left a smooth mould lined by its capsule. In this mass was a cavity with rather smooth walls lined by firm old dark-red fibrine, admitting three or four fingers to their full length, through an opening in the abdominal aorta, two inches long by one and three quarters wide, just below the cœliac axis, and six and three quarter inches from the mouth of the thoracic aneurism. The inner coat of the artery terminated in part abruptly at the brink of the aneurism; elsewhere seemed gradually lost in the cavity. The particular point whence the hæmorrhage occurred was not noticed.

About an inch below the cœliac axis, the superior mesenteric artery, as pointed out by Dr. Jackson, was found cut off close to the aorta, but so completely obliterated or plugged that no trace of its orifice could be found upon the inner surface of the sac. A little less than a quarter of an inch below the level of the superior mesenteric, the right renal artery was traced for an inch and a quarter from a cut surface to a point in the sac nearly two inches from the mouth, where it became completely obliterated. The left renal was not positively recognized.

The right kidney was rather below the normal size, as if from compression. In the cortex were two or three irregular masses of a pale yellowish color, bordered by a bright red line, which proved under the microscope to be very fatty, the tubes being crowded with

granular pellets corresponding to the original epithelium. Left kidney rather above the normal size. The cortical substance of both showed bright red streaks and spots; but in general the epithelium, though slightly granular and opaque, was normal in other respects.

Liver large, rather fatty. Other organs not remarkable.

SPONTANEOUS DISLOCATION OF THE CRYSTALLINE IN BOTH EYES. SUBSEQUENT SEVERE SYMPTOMS IN ONE EYE REQUIRING THE REMOVAL OF THE DEGENERATED LENS BY OUT-SCOOPING COMBINED WITH IRIDECTOMY.

[Read before the Boston Society for Medical Improvement, and communicated for the Boston Medical and Surgical Journal.]

By HENRY W. WILLIAMS, M.D.

On the 19th January, 1866, I saw a man of about 40 years of age, who gave the following account of his case. He had always, since his remembrance, had imperfect vision in the left eye, and had at times observed in its anterior chamber what seemed like a drop of olive oil, which would again disappear. From his account of his symptoms there can be no doubt that this was the displaced crystalline. About a year since he began to have pain in and around this eye, with photophobia and lachrymation, accompanied by injection of the vessels of the globe. After some time a cloudy appearance was observed in the field of the pupil, and vision was gradually lost. In the right eye, also, the sight became less perfect, and he was annoyed by double images in this eye, one of them being more clearly defined than the other.

On examination, the left pupil was seen to be greatly distended, and its field was occupied by a dark mass with a ring of yellowish opacity around its margin. So dark was the centre of the pupil that it seemed at a first glance perfectly clear. The anterior chamber was nearly filled, and the cornea pressed upon by this mass, and by its crowding upon the ciliary region, an irritable condition was kept up, which not only disabled him from business, but threatened to induce a sympathetic inflammation of the other eye. The globe was a little harder than the other. He was therefore advised to submit to an operation for the removal of the degenerated lens, which if allowed to remain displaced must continue to be a source of irritation, and, if it should appear to be necessary, to sacrifice even the anterior half of the globe, so as to obtain relief from pain and secure the safety of the other eye.

The right eye showed a dislocation of the crystalline towards the inner canthus, to an extent equal to half its diameter. Slight cloudiness was also beginning in the lens. With much difficulty he could read a large print when brought very near his eye. A narrow crescent of clear space could be seen at the outer margin of the pupil,

and through this space he could see much better with a cataract glass. On dilating the pupil with atropia, so as to enlarge this crescentic field, vision was greatly improved with the aid of glasses. He could now read fine print with a lens of $4\frac{1}{2}$ inches, and saw distant objects well with 10 inches focus.

A double operation was performed on the left eye. A large iridectomy was first done, upwards, as a means of preventing subsequent iritis and relieving the congestion of the ciliary region, and to give room for the extraction of the hardened crystalline. The lens was then removed with my modification of Mr. Critchett's spoon. It proved to be nearly black in its central portions, while its margin was of cretaceous hardness.

Immediate relief from the discomfort with which he had so long suffered followed the operation, and he was able to bear the light better than for a long time previously. The very large corneal wound healed at once, and the patient was able to return home on the fifth day. On the 10th of February I heard that he was doing well.

ON THE ACTION OF MEDICINAL PREPARATIONS OF IRON ON THE TEETH.

By JOHN SMITH, M.D., F.R.C.S., Surgeon-Dentist to the Royal Infirmary, &c.

THE preparations of iron in medicinal use are very generally supposed to exert, in a direct manner, an injurious influence on the teeth of patients for whom they are prescribed. Complaints regarding their destructive tendency in this respect are familiar both to the general practitioner and to the dentist. With the view of ascertaining how far such complaints are well grounded, the experiments I have here briefly to notice were made.

Eight of the compounds of iron in most general use as remedial agents, and along with them one or two other non-ferruginous compounds, sometimes suspected of injuring the teeth, were selected, and in solutions of these compounds the same *number* and the same *kinds* of human teeth were immersed. In each of the separate solutions four teeth were placed; and in all cases these four teeth consisted of a sound canine and bicuspid, and a decayed upper and lower molar. The solutions consisted of:—

I. Sach. carb. ferri, gr. xx.; aquæ, ℥ i.

II. Carb. ferri, gr. xx.; aquæ, ℥ i.

III. Syrup. phos. ferri, ℥ ss.; phos. ferri, gr. x.; aquæ, ℥ ss.

IV. Syrup. iod. ferri, ℥ ss.; aquæ, ℥ ss.

V. Citrat. quinæ et ferri, ℥ ij.; aquæ, ℥ i.

VI. Vinum ferri, ℥ ss.; aquæ, ℥ ss.

VII. Sulphat. ferri, ℥ ss.; aquæ, ℥ i.

VIII. Tinct. mur. ferri, ℥ ij.; aquæ, ℥ i.

At the same time the following non-ferruginous solutions were tested:—

I. Sulphate of quinine, gr. v.; sulphuric acid, gtt. i.; water, $\frac{3}{4}$ ss.

II. Phosphoric acid dilute, $\frac{3}{4}$ ss.; water, $\frac{3}{4}$ ss.

III. Condyl's fluid (crimson), $\frac{3}{4}$ ss.; water, $\frac{3}{4}$ ss.

On examining the respective solutions after twenty-four hours, the teeth were found unaltered in those of the carbonate and saccharine carbonate of iron, the phosphate of iron, the iodide of iron, the citrate of quinine and iron, and in that of the sulphate of quinine. In the solution of the vinum ferri, the liquid itself was somewhat turbid, the teeth, however, seeming to be untouched. In that of the muriate of iron, a turbid sediment filled the bottom of the bottle, and covered up the teeth from view; the fangs of the teeth were somewhat soft and flexible, and the enamel easily scraped down. The sediment, under the microscope, presented an amorphous granular appearance. In that of the phosphoric acid they seemed somewhat flexible at their more slender parts, such as the points of the fangs; and the enamel looked opaque and chalky, but did not feel crumbling or soft. In the solution of Condyl's fluid they were deeply stained, but in no way altered in texture.

The teeth in the different solutions were allowed to remain ten days longer, and on examining them at the end of that period, neither those in the carbonate or saccharine carbonate of iron, the phosphate of iron, the iodide of iron, nor the citrate of iron and quinine, presented any further change, except that those in the saccharine carbonate were slightly blackened—the discoloration, however, being superficial, and nearly all removable by brushing. A ropy sediment adhered to those in the sulphate of quinine, and perhaps a very slight softening of the surface of the fang might be present. The ropy sediment presented, under the microscope, the appearance of a mass of acicular crystals of various sizes, interspersed with threads or fibres of some kinds.

In the solutions of the vinum ferri, the sulphate of iron, the muriate of iron, the phosphoric acid, and of Condyl's fluid, certain changes were observable. In the vinum ferri the cloudy precipitate was somewhat increased, and the teeth were dark and discolored, especially in the fangs, but otherwise uninjured. In the sulphate of iron solution a very copious precipitate had formed. The teeth were not softened throughout their whole thickness, but had a layer of soft substance covering in what of the enamel and dentine remained hard beneath. They were also considerably discolored. In the solution of the muriate of iron, a large deposit of the cloudy precipitate had accumulated, and in this the teeth lay buried. Their fangs were very soft, and quite flexible, and the enamel was wasted away, and on being touched crumbled down like chalk. In those again, immersed in the phosphoric acid solution the fangs were quite flexible, and were diminished in bulk; the enamel could be deeply

scratched with any blunt instrument, and felt like Derbyshire spar. It was more wasted, but not so soft as that of the teeth in the muriate of iron solution. Notwithstanding this loss of salts of lime, on drying by exposure to the air these teeth have again become hard and unyielding. In the Condyl's solution, the teeth were covered by a very dark incrustation, which, however, could be nearly all removed by brushing, or still more effectually by applying dilute muriatic acid; otherwise they were uninjured. The solution itself had become almost colorless.

From these facts it would appear that certain preparations of iron, when directly applied, do exercise a powerful effect on the substance of the teeth. And the ratio of the effects obtained would seem to prove, that of all the preparations employed in these experiments that of the tincture of the muriate of iron acts most powerfully, the sulphate of iron next, and next to that again, although in comparison very immaterially, the vinum ferri—the other preparations of iron appearing to be inert.

Of the other substances experimented with, phosphoric acid seems the only one producing injurious effects on the teeth, which it does, however, to a very marked extent.—*Edinburgh Medical Journal.*

CONTAGIOUS DISEASES AND THEIR MODE OF PROPAGATION.

THE following extract from an address delivered by Dr. Lankester at the Social Science Congress on Monday, Oct. 9th, cannot fail to interest our readers.

“Among our sanitary reformers there are two great schools, one of which maintains that the great mass of zymotic diseases are produced by special poisons, and are called contagionists, while another school do not believe in the existence of special poisons, but believe that certain general conditions of sanitary neglect and dirt are alone necessary to produce the group of zymotic diseases, and they are called anti-contagionists. Now, I believe that the extreme views of either school are wrong, and I have a very deep impression that for sanitary measures to be directed by one or other party in the present state of our knowledge of the diseases would be to plunge us into worse evils than quiet submission to their unresisted influence. For an officer of health to suppose that cleansing, and draining, and washing, would arrest the progress of smallpox in a house full of unvaccinated persons would be an utter absurdity; while the placing a cordon around an ill-ventilated and badly warmed house, expecting to keep off bronchitis and pneumonia, while the temperature is 12° below the freezing point, would be equally absurd. But while all are agreed that smallpox is a contagious disease and bronchitis is not, there is a large class of diseases on which sanitary authorities differ as to their nature, and the best modes of arresting their development.

It is on this account that I now propose briefly to examine what is really known of the nature of contagious diseases and their mode of propagation; and if I succeed in nothing further, I hope I shall be able to show that it is of the utmost importance in all our sanitary operations that we should, at least, consider the issues of both theories; that while believing in contagion, we should act as if all depended on the removal of the general external agencies of disease; or while believing in the spontaneous origin of diseases in dirt, we should yet do all to avert the possibility of their propagation by contagion. It is of the highest importance, at the same time, that we should pursue the inquiry into the origin and nature of those zymotic or pneumatic diseases which carry off annually upwards of 100,000 of our population. In order to do this I think there are three circumstances that demand our attention. There is, first, the poison that is supposed to kindle the disease; and, secondly, there is the medium that conveys it to, thirdly, the person predisposed to take the disease. If we lose sight of any one of these elements in investigating zymotic diseases, we shall most assuredly get wrong, and practically commit great mistakes. Thus, let me take smallpox as an example. In order to propagate this disease there must be, first, the poison-matter from a smallpox pustule; and, secondly, a medium of conveyance, either the point of a lancet or an atmosphere to convey the poisonous germs; and, thirdly, there must be a person predisposed to take it. If the poison is not there, no amount of predisposition, that we are aware of, will engender the disease. Again, if the poison is there, and the predisposed person, there must be a medium of conveyance; and if a predisposed person is at one end of the room and the affected individual at the other, and the current of the atmosphere blows from the unaffected to the affected person, no poison will pass and no disease be established. Or again, the atmosphere may be so extensive as to dilute the poison to a tenuity by which it becomes powerless; or the atmosphere may be artificially ozonized, or iodized, or chlorinized so as to destroy the germs of the poison. But let the poison be ever so intense, and the medium ever so ready to convey it, if the unaffected person has had the smallpox or been vaccinated, no disease will be produced. Hence, we must study the poison-makers, the poison-bearers, and the poison-takers.

Now, with regard to poisons, even the anti-contagionists admit that in what they call miasmatic diseases conglomerations of dirt and filth, or matters in their wrong places, do get into the system, and, at one time or another, do upset and damage the healthy working of the machinery; and they are also bound to state in a scientific way what compounds are produced by dirt, and in precisely what way they affect the system. There can be no doubt that certain inorganic agencies, such as carbonic acid, sulphuretted, phosphuretted, and carbonetted hydrogens, ammonia, and sulpho-cyanogen, do produce injurious effects upon the system. Continued exposure to such

exhalations may prevent a proper oxidation of the tissues, and render it predisposed to take in the diseases of special poisons, but we have no evidence to show that any of these agents—although they will destroy life—are capable of producing alone any of the forms of miasmatic disease. Again, it seems demonstrated that there arise, during the decomposition of vegetable and animal matters, certain organic molecules which, being taken into the system, would produce certain definite changes in the system constituting well-known forms of disease. Thus, ague and kindred fevers, called paludal, and paroxysmal fevers, do not seem to be produced by poisons formed in the animal system, but by poisons formed during the decomposition of vegetable matter. A certain amount, also, of the diarrhoea of summer is to be set down to the decomposition of animal and vegetable matters. Certain quantities of these matters are directly taken into the stomach and bowels, while others appear to come in contact with the mucous surface by inhalation. There is, also, one of the endemic and epidemic fevers of our country that is supposed by high sanitary and medical authorities to originate in the spontaneous decomposition of organic matters in drains and sewers; hence, it has been called 'drain fever.' It is, however, better known by the name of gastric or typhoid fever. That this disease is generated by a specific poison has been demonstrated by Dr. William Budd, of Bristol, and should it be capable of demonstration that this disease is really generated *de novo* by the matter of the drains and sewers, it would be an interesting fact, as showing the possibility of a contagious disease being produced afresh. But up to the present time we have no conclusive experiment with regard to the origin of any of the specific contagious diseases. There is no error, perhaps, of more vital importance to public health than that which was fallen into by some of our early sanitary reformers—a belief in the spontaneous origin of the several forms of diseases produced by specific contagions. The most common forms of contagious diseases in this country are smallpox, scarlet fever, measles, whooping cough, typhus fever, typhoid fever, and our occasional visitant—Asiatic Cholera. Of the intricate nature of the poisons producing these diseases we know but little, but recent researches with the microscope lead us to hope that we are not far distant from the time when at least the form of the poisons of these diseases will be made visible to the human eye. It is a fact known to all that the blood contains two sorts of cells or globules—the one red, the other white. The white cells are composed of matter in a state of vital change. It is these cells which accumulate in inflamed parts and which form the pus found in vesicles, pustules, abscesses, and inflamed surfaces of the body. These pus cells have a great power of multiplication, and they retain their vitality after they have been removed from the living body. We can convey common pus cells from one living body to another and make them increase. There is a disease of the eye

attended with a large formation of these pus cells, and these may be conveyed through the air from one person's eye to that of another and produce the same disease. In the disease known as pyæmia these cells assume a specific character; and Dr. Richardson informs me that he has succeeded in producing, artificially, pyæmia in animals by introducing the secretions of an animal affected with pyæmia into one that is not. In smallpox we have a disease characterized by pustules over the body. Each pustule contains a secretion abounding with pus cells, and the matter with which they are formed. It is the introduction of this purulent matter into the blood that sets up the dreadful malady of smallpox. In the same way we find the vesicle of cowpox charged with white cells, and the 'germinal matter' of Dr. Beale. The germinal matter here, however, does not possess the vitality and energy of that of the smallpox pustule. It is seldom conveyed through the air; like some other animal poisons with which we are acquainted, it requires contact; but being introduced into the blood of another person, it produces the same disease—always the same disease, never another. We may learn much of the nature of these poison-cells by the study of those we know so well. These cells, or germinal elements, retain their vitality long after they have been removed from the body, if you exclude them from the air. The vaccine lymph has been conveyed between pieces of glass, or dried on tips of bone or threads of line and cotton, all over the globe, and has been found capable of engendering the disease cowpox. This shows us how all these poisons may be covered over in linen, cotton, and woollen fabrics, how they can be conveyed in letters and newspapers, how they may adhere to inanimate substances of all kinds, and only need the awakening influence of a little moisture to summon them to awake and live anew. No one, that I am aware, has yet isolated the poison of scarlet fever, of measles, of typhus, of cholera, and of the other diseases of the group of contagious diseases; but, reasoning from analogy, and there could hardly be a better instance of the process, we are driven to the conclusion that these diseases depend on a cause similar to that of smallpox, and that the real form of the poison is the charged white cell of the blood. It is, however, interesting to notice some varieties in the habits of these poisons. Thus, we are not aware that the poisons of smallpox, measles, scarlet fever or typhus are conveyed by any means but through air, while there is every reason to believe that the poisons of typhoid fever and cholera are conveyed by the agency of water. There is an interesting relation between this fact and the seat of the disease, for, while one set of diseases manifest themselves by eruptions upon the skin, the other set is characterized by derangements of the mucous membrane of the intestines.

A question of high interest arises here, and it is one that has not at present been settled, and that is, as to whether the poison matter

of these diseases is capable of multiplying itself by cell-division, or the ordinary forms of the growth of fluvial matter out of the body. It does not seem impossible that this should be the case, although at present we have no demonstration of the fact. We know that such multiplication takes place among the lower forms of plants, as the yeast, or ferment fungus (*Saccharomyces Cerevisiæ*), and that it also occurs among the vibriconds and monadinæ in the animal kingdom. Another interesting question, connected with these poisons, is the possibility of transformation or development. In the animal kingdom we have this phenomenon taking place, that an animal passing from its egg state to its adult stage is capable at each stage of multiplying itself, so that a number of creatures are produced at each stage of its growth, capable of attaining, under proper external circumstances, the adult stage. Now it may be that among these cell-poisons there are stages of development at each of which the cell is capable of propagating its own form and no other, till it meets with the proper external circumstances for a further change or development. Professor Huxley relates that on board the Rattlesnake, after they had been six weeks at sea, the cook got an attack of erysipelas; this spread through the ship and ceased. After this one of the sailors had mumps, and this also spread through the ship. There are other interesting facts bearing on this point, but I throw out these hints here as subjects full of practical importance to the sanitarian. Let me now say a few words with regard to the means of conveyance of poisons. The most obvious of these means are the atmosphere and water. The air, to carry most poisons, must be warm and moist. The poison of yellow fever spreads in hot climates; the poison of typhus is arrested by heat on the one side and cold on the other. It prevails, in fact, only in climates having a range of temperature between 40° and 62° Fahrenheit. At the temperature of boiling water all these poisons are destroyed—a most important fact, as we have in every household in Europe the means of destroying them. But there are other means of conveyance besides air and water. Articles of food, articles of wearing apparel, bedclothes, curtains, carpets, and all vessels and depositories containing the secretions of human beings, may retain the poison cells in all their integrity. These may carry the poison from household to household, disseminate them in our streets, our omnibuses, our railways, steamships, and public conveyances of all kinds. The drain may carry them into the sewer, and the sewer into the river, but in their course they escape from our ventilating shafts, our gully holes, and open closets. They may be emptied into our wells and rivers, and conveyed to our bodies by means of spring water or river water. They may be shut up in drawers or in old closets (of which there are many striking instances on record), and, at any moment when brought in contact with the human system, they may start into life and activity again, to renew their ravages on systems predisposed to their action. That the

poison of a disease may exist, and every possible access to a system be present, and yet the disease be not taken, is well known. Instances frequently happen of persons living to old age, without having had any of the ordinary contagious diseases of mankind. It would be well to make a more accurate study of these cases. But we know something of the laws of predisposition to disease. We know, for instance, that persons who have had smallpox are not disposed to take it again. We know that in nine cases out of ten if persons have been vaccinated they will not take smallpox. This is one of the great triumphs of our modern civilization. It is the beacon of our hopes with regard to crushing out forever the poisons that can only be propagated in human systems. But our knowledge of predisposition extends further than this. We know that where the four great factors of our life have been scantily supplied, or vitiated, there predisposition, not only to idiopathic and self-generated disease exists, but to receive the germs of the poison fevers, of which I have been speaking. So well is this known, that we can point out certain external conditions which will so act upon the human system as to predispose it to certain forms of disease. Thus, among our working men and women who live in badly ventilated and over-crowded houses we find those who are most ready to take the poison of typhus. Among the underfed, the fever called relapsing, and which differs from typhus and typhoid, finds its most ready victims. Hence it has been called famine-fever. But no class or condition of men have been discovered who are not susceptible of these poisons. The medical man, who lives free from the influence of over-crowding or famine in his own home, is frequently stricken down with these fevers. The anxiety of the student, the statesman, or the prince may undermine his health, and render him a ready victim for the poison that lies concealed like a snake in the grass in his path. It is not necessarily among the over-crowded and badly-ventilated rooms of the poor, and the squalor and filth of our lowest classes, that scarlet fever selects its victims and commits the greatest ravages. The homes of the rich and the hearths of the comfortable middle classes of England are made desolate by this all-pervading scourge, and it is a mockery to say that we know the conditions of those who will be the subjects or the victims either of scarlet-fever, or its twin sister of mischief, diphtheria. That both these diseases depend on a special poison, which can be communicated through the medium of the air, and preserved in activity or inanimate substances, as clothes and excreta, I have no doubt; but we cannot predict with any certainty who will be their victims."—*London Chemist and Druggist.*

Bibliographical Notices.

The Practice of Medicine. By THOMAS HAWKES TANNER, M.D., F.L.S., Member of the Royal College of Physicians, Vice President of the Obstetrical Society of London, &c. &c. From the Fifth London Edition. Enlarged and Improved. Pp. 835, 8vo. Philadelphia: Lindsay & Blakiston. 1866.

We are glad to see this eminently practical work in a form bringing it within the reach of the American practitioner. The enormous cost of foreign books at the present time must of necessity limit the importation of the original work to a very few copies, and the profession here would be so much the losers if it were not for this re-print. We cannot forbear to express the hope that the author may be to some extent the gainer pecuniarily through this re-publication.

As we have designated it above, this is a most valuable, practical work. It covers over a vast range of subjects, being more comprehensive in its plan than any similar work that we are acquainted with, and yet giving to each subject space enough to present it fully in all its details in a precise, accurate, scientific style, while it is entirely free from the dryness which it is so difficult to avoid in attempting to give a concise account of a disease. Illustrative cases are frequently introduced, which add much to the interest of the volume.

The first fifty pages of the work are devoted to the blood and its various morbid conditions, and we observe that the author has kept up with the progress of chemical and microscopical researches on this most important fluid; from this he passes on to general diseases. The work is divided into sixteen parts, each including a distinct class of diseases, and concludes with an appendix of formulæ, &c., of more than a hundred pages, which is very instructive.

To review such a book is much like reviewing an encyclopædia. One can hardly open it anywhere without finding something worth remembering. The general tone of the author's views in the treatment of disease is shown in the following extract, which concludes his chapter on Inflammation:—

“From all this the conclusion appears evident, that in the treatment of acute inflammatory diseases practitioners must be content to trust more to Nature and less to heroic remedies than they have been in the habit of doing; for it is highly probable that though we may be able to guide inflammations to a successful termination, yet we cannot cut them short, and any attempts to do so will merely increase the patient's danger. The risk of all inflammations being in proportion to the weakness of the patient, the amount of blood-poisoning, and the complications which arise, it surely cannot be wise to go out of our way to produce debility, and thus favor the occurrence of toxæmia. But the fact is, and it ought never to be lost sight of, that the body possesses a perfectly marvellous power whereby it protects itself against diseases, wards off some, cures in the best and speediest way many of those that have set in, and by a process of its own brings others more slowly to a favorable issue. This innate power is called the *vis naturæ medicatrix*, being justly appreciated by physicians and philosophers, and highly praised by them. Of itself it is

sufficient to cure numerous diseases; in almost all, its influence is beneficial; and, moreover, the remedies that are in their own nature the best, are only of use in so far as they stimulate, direct and control this inherent virtue.' ”*

In turning over the leaves we come occasionally to a subject in which the author has omitted to give some recent observations or practical results of importance, which probably have escaped his observation. Thus, in treating of measles, he says nothing of the very interesting experiments of Dr. Salisbury, in which it is shown that a disease very like if not identical with measles may be produced by inoculation with the fungus growing on wheat straw, thus accounting for its frequent otherwise inexplicable appearance among our troops during the late rebellion. In speaking of chorea he fails entirely to mention the one remedy which comes nearer to being a specific for this disorder than any other, namely, arsenic, particularly in the form of Fowler's solution. In his remarks on the expediency of tapping the chest in cases of extensive effusion, he discusses the *pro* and *con* of the operation as if the question of danger had not been entirely set at rest by what we may call the American method, devised by Dr. Morrill Wyman, of Cambridge, and so often practised with complete success and freedom from severe symptoms by our townsman, Dr. Bowditch. Of this operation he can hardly have heard, as he does not allude to it, and the operation which he describes, of opening the cavity with a large trochar, introducing a probe and cutting down on it at another point for the passage of a seton, so that an India-rubber drainage tube may be employed, cannot be compared with the trifling operation of Dr. Wyman for safety or efficiency in most cases.

The opinion of Dr. Tanner, as of a man of practical mind, extensive observation and sound judgment, is of value on the great subject of medical discussion at the present time—the cholera. Here is what he says on the pathology of this disease:—

“The only explanation which can be given of the cause of cholera is, that it is due to some *materies morbi*—a septic agent—the existence, increase, power and transmission of which from place to place is favored by some particular state of the atmosphere, associated, probably, with a high temperature. The action of the poison is undoubtedly encouraged by filth of all kinds. As far as I can glean from the recorded evidence—and I have carefully studied the subject—it certainly appears to me to be, to a certain degree, contagious; in other words, I believe that human intercourse has a share in propagating the disease, though it is not the only means of effecting its diffusion. We must remember, however, that cholera, like other contagious disorders, can only be taken by a person predisposed to disease: we may indeed compare a contagious or infectious disorder to a seed, which, unless put into a fit soil, undergoes no change—does not grow or take root.”

The American edition of Dr. Tanner's book is printed in large, clear type, and is furnished with a very full index, covering seventeen pages in double columns, which is a very valuable appendage to

* *Conspectus Medicinæ Theoreticæ.* By Jacob Godfrey.

it. We most cordially commend it, as a whole, to our professional brethren, as containing the fullest and most enlightened views of the medical profession, and the most recent information concerning the wide range of subjects which are compassed within its plan.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, FEBRUARY 22, 1866.

THE CHOLERA CONFERENCE.

As our readers are by this time fully informed, the history of the present epidemic of cholera has very generally impressed the medical mind, both in this country and in Europe, with the idea that its propagation has been to a very great extent through direct transmission from one focus of disease to another. Leaving out of view the question of direct contagion in the sense in which that word is ordinarily used, the facts are too notorious to be disregarded, that its progress has been almost without exception in the direct line of travel from the source of its original outbreak at the last great Mohammedan celebration of the Bairam. In view of the earnest discussion which has sprung up, unsettling to a very great degree opinions heretofore generally held by the medical profession, it was a very wise move on the part of the French Government which has led to the proposal to the different nations of Europe to send delegates of medical men to a convention to be held at Constantinople, to discuss in the fullest manner all the questions concerning the origin and cause of Asiatic cholera, with a view to the establishment of such sanitary and restrictive measures as shall seem the most likely to limit its ravages now, and check them at the outset hereafter.

In this convention the United States have been invited to take a part; and a few days since the President sent to Congress a message transmitting the correspondence of the Secretary of State with the French Minister, together with other papers relating to the proposed international convention. The Secretary of State promises to give the subject his attentive consideration, and on the 21st of last November asked the opinion of the Surgeon-General of the United States, and for any suggestions he might be disposed to make in the premises. In reply, the Surgeon-General proposes that he be empowered to designate two of the surgeons of the Medical Staff of the United States Army as members of such a commission. The Government has also received assurances of the cordial coöperation of the Turkish Government in the proposed conference, Lallah Effendi, the chief physician of the Imperial Court, and Dr. Barthollette, Counsel of Health, being nominated as its representatives. A cordial welcome to the delegates is promised by the Court.

It does not appear by the above that any final action has been taken by our Government by the appointment of delegates, so that the question is still fairly open as to what is the best method of selection and who are the best men to be selected. And here we would frankly say, that we are decidedly of opinion, that the best method of secur-

ing the best representatives of the medical profession in this country to attend the proposed conference is *not* the method proposed by the medical head of the army. It was hardly to be expected, we suppose, that Mr. Seward could have any very clear idea of the best way of getting at the men most fitted for the important offices in question, and it was the most natural thing for him to turn to the medical bureau for advice. Equally natural was it for the Surgeon-General to look for the most fitting men for this appointment among that class with which he was best acquainted, and which he naturally looks upon as constituting a distinguished class, if not the very élite of the medical profession. It should not be forgotten, however, that in discussing the important questions which will come before the conference, qualities of an eminently judicial character are called for. The soundest judgment and the most discriminating acumen, together with the most ingenuous fairness and freedom from prejudice of opinion, should characterize all who are entrusted with the responsible duties of which we are speaking. It is also highly desirable that the delegates should be men of practical experience, who have had a personal acquaintance with cholera as it has appeared during former epidemics in our large cities. Now however distinguished the medical officers of the army may be (and there are many of them who do great honor to their profession and the country), yet we think it can hardly be claimed that the greatest names of the profession are inscribed on the roll of the Medical Staff; nor is it so likely that the desired practical experience can be found within that body as outside of it. The questions involved are of national importance, not mainly connected with the medical welfare of the army. It is, therefore, to the American Medical Association that we feel the question should be referred, in order that the gentlemen most gifted with those qualities which we have designated, together with many others desirable in representatives of the whole profession in a European convention, should be selected for this important office. We feel that the President and Vice Presidents of that Association would constitute a body much more likely than any one man to designate the most fitting representatives of the whole country. We mean no disparagement to the Surgeon-General, for whom we entertain the highest respect; only that the method we propose seems to us the best calculated to meet the wishes of the whole profession, and to lead to the best results. As it does not appear that the delegates are yet appointed, or the day for the conference even fixed as yet, we trust it is not too late for the selection to be made in some such way as that we have proposed.

Council of Hygiene.—We have received from the so-called Citizens' Association of New York the following resolutions adopted for the prevention and mitigation of cholera. The Council is composed of the following officers and members:—Joseph M. Smith, M.D., *President*. Willard Parker, M.D., *Vice President*. Stephen Smith, M.D., *Secretary*. Drs. Edward Delafield, James Anderson, James R. Wood, Alonzo Clark, Elisha Harris, Isaac E. Taylor, Alfred C. Post, Henry D. Bulkley, R. Ogden Doremus, Charles Henschel, John W. Draper, Gurdon Buck, *Members*.

Whereas, The commercial and social relations of the cities, villages

and communities of the State have become so intimate by the great facilities for travel, that contagious, infectious and epidemic diseases are rapidly and widely disseminated from populous towns, where they are fostered and frequently generated by the neglect of sanitary works, to other towns along the principal public thoroughfares, and to the most remote rural districts; and

Whereas, Cholera, the most fatal of modern epidemics, and soon apparently to visit this country, is governed by the same law of progression as other pestilential diseases, spreading from town to town along the great routes of travel, and selecting the filthy and unclean districts of cities for its ravages; and

Whereas, Experience teaches that the communicable diseases of towns and epidemic cholera may be controlled, and frequently suppressed, by the timely and rigid enforcement of proper sanitary regulations; and that when the latter is prevailing its severity may be greatly mitigated, and its fatal issues prevented by the prompt and efficient treatment of its premonitory symptoms; therefore

Resolved, That the people of this State have a common interest in the public health of its cities and villages; and, for their own safety, as well as for the public good, should, with united effort, sustain every measure designed to effect sanitary improvements of towns, and to prevent the spread of pestilential diseases therefrom.

Resolved, That in view of the approach of Asiatic cholera, we urge the medical profession of the State of New York to form voluntary organizations in every city, town, village and community exposed to an attack of the epidemic, for the purpose of effecting, *first*, needed local sanitary improvements; and, *second*, to organize a corps of house-to-house visitors, who, in the event of the prevalence of cholera, shall visit the poor at their homes daily, and search out and promptly treat all cases of premonitory diarrhoea.

Resolved, That all such organizations be invited to correspond directly with this council, and with each other, in order to concert of action in the adoption and prosecution of measures of prevention and mitigation of cholera, and for the purpose of a systematic study of its various phenomena over a large field.

American Medical Association.—The seventeenth annual session will be held in the city of Baltimore, on Tuesday, May 1, 1866. The following committees are expected to report:—

On Prize Essays, Dr. Austin Flint, Sen., New York, Chairman.

On Quarantine, Dr. Wilson Jewell, Pa., Chairman.

On So-called Spotted Fever, Dr. James J. Levick, Pa., Chairman.

On Ligature of the Subclavian Artery, Dr. Willard Parker, N. Y., Chairman.

On Tracheotomy in Membranous Croup, Dr. Alex. N. Dougherty, N. J., Chairman.

On Rank of Medical Corps in the Army, Dr. C. S. Tripler, U.S.A., Chairman.

On Rank of Medical Corps in the Navy, Dr. T. L. Smith, N. Y., Chairman.

On Medical Literature, Dr. C. A. Lee, N. Y., Chairman.

On Medical Education, Dr. Samuel D. Gross, Pa., Chairman.

- On American Necrology, Dr. C. C. Cox, Md., Chairman.
 On Patent Rights and Medical Men, Dr. David Prince, Ill., Chairman.
 On Alcohol and its Relations to Man, Dr. Gerard E. Morgan, Md., Chairman.
 On Insanity, Dr. Alfred Hitchcock, Mass., Chairman.
 On Milk Sickness, Dr. Robert Thompson, Ohio, Chairman.
 On the Relation which the Doctrine of the Correlation and Conservation of Forces bears to the Physiological and Pathological Condition of the Human System, Dr. S. L. Loomis, D. C., Chairman.
 On the Progress of Medical Science, Dr. Jerome Candee Smith, N. Y., Chairman.
 On Diphtheria, Dr. H. D. Holton, Vt., Chairman.
 On the Comparative Value of Life in City and Country, Dr. Edward Jarvis, Mass., Chairman.
 On Drainage and Sewerage of Cities in their Influence on Health, Dr. Wilson Jewell, Pa., Chairman.
 What Effect has Civilization on the Duration of Human Life, Dr. Augustus A. Gould, Mass., Chairman.
 On Disinfectants, Dr. E. M. Hunt, N. J., Chairman.
 On Compulsory Vaccination, Dr. A. Nelson Bell, N. Y., Chairman.
 On Strangulated Hernia, Dr. W. F. Peck, Iowa, Chairman.
 On the Causes and Pathology of Pyæmia, Dr. J. J. Woodward, U.S.A., Chairman.
 On the Use of Plaster of Paris in Surgery, Dr. James L. Little, N. Y., Chairman.
 On the Etiological and Pathological Relations of Epidemic Erysipelas, Spotted Fever, Diphtheria and Scarlatina, Dr. N. S. Davis, Ill., Chairman.
 On Meteorology, Medical Topography, and Epidemics,
 Dr. J. C. Weston, Me. Dr. D. Francis Condie, Pa.
 " P. A. Stackpole, N. H. " T. Antisell, D. C.
 " C. L. Allen, Vt. " O. S. Mahon, Md.
 " A. C. Garratt, Mass. " T. M. Logan, Cal.
 " C. W. Parsons, R. I. " R. C. Hamill, Ill.
 " B. H. Catlin, Conn. " J. W. H. Baker, Iowa.
 " E. N. Chapman, N. Y. " Abm. Sager, Mich.
 " E. M. Hunt, N. J. " J. W. Russell, Ohio.
 WM. B. ATKINSON, *Permanent Secretary, Philadelphia.*

The Chicago Medical Journal has passed out of the hands of Drs. DeLaskie Miller and Ephraim Ingals into those of Drs. E. L. Holmes, H. M. Lyman and R. M. Luckey. From the well-known ability of the new Editors, in the midst of such a large and active community as that of Chicago, we feel assured that the interests of the medical profession will be well represented by them, and the well-earned reputation of the Journal be more than sustained.

Boston City Hospital.—The following appointments have been recently made at the Boston City Hospital. The selection of house physicians and house surgeons at this establishment is based, as it

should be in all hospitals, upon merit and a thorough examination in all branches of medicine.

Admitting Physician—Dr. George Derby.

House Officers for ensuing year, Medical Department—J. F. Alleyne Adams, Charles P. Kemp.

Surgical Department—James B. Brewster, L. F. C. Garvin.

Ophthalmic Department—Dr. O. F. Wadsworth.

It gives us great pleasure to announce that Surgeon Norton Folsom, of Cambridge, a late graduate of the Massachusetts Medical College, and who has served both as Acting Medical Inspector and Acting Medical Director of Weitzel's Corps in Texas, has been made Brevet Lieut.-Colonel of U. S. Volunteers for faithful and meritorious services.

Deaths and Marriages in Boston in 1865.—During the year 1865, Mr. Apollonio, the City Registrar, issued 2,866 certificates of marriages—94 less than the number issued the preceding year. The number of deaths last year in this city was 4,539; in 1864, 5,111.

Deaths in the City of Providence, R. I., during the month of January, 1866, 88. The births, marriages and deaths in Providence, in 1865, as compared with 1864, were as follows:—Marriages, 709 in 1865, or 30 less than in 1864. Births in 1865, 1,298; in 1864, 1,344. Deaths in 1865, 1,211; in 1864, 1,281. The population in 1865 was 64,595, which gives one birth in 42, one death in 45, and one person married in 38.

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, FEBRUARY 17th, 1866.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	32	35	67
Ave. mortality of corresponding weeks for ten years, 1856—1866	39.5	38.6	78.1
Average corrected to increased population	00	00	85.07
Death of persons above 90		0	0

ERRATUM.—The name of Dr. Bowen, Assistant Surgeon U.S.N., was by mistake printed "Rowen" on page 37 of the present volume.

COMMUNICATIONS RECEIVED.—Cases in Country Practice, No. XI.—Aluminum in Dentistry, by Augustus Mason, M.D.—Extracts from the Records of the Berkshire District Medical Society; Clinical Cases from the Berkshire Medical College, &c.

PAMPHLETS RECEIVED.—Reports of the Trustees and Superintendent of the Butler Hospital for the Insane, Providence, R. I.—Addresses at the Fifth Annual Session of the American Dental Association, by W. W. Allport, D.D.S., Daniel Brainard, M.D., and N. S. Davis, M.D., at Chicago, July, 1865.—Thirty-third Annual Report of the Trustees of the State Lunatic Hospital at Worcester.

DEATHS IN BOSTON for the week ending Saturday noon, February 17th, 67. Males, 32—Females, 35. Accident, 2—apoplexy, 2—Inflammation of the bowels, 1—disease of the brain, 1—bronchitis, 2—cancer, 3—consumption, 16—croup, 2—debility, 1—diarrhoea, 2—diphtheria, 2—dropsy, 2—dropsy of the brain, 2—dysentery, 1—dyspepsia, 1—scarlet fever, 1—typhoid fever, 1—fistula, 1—disease of the heart, 1—infantile disease, 3—jaundice, 1—disease of the kidneys, 2—congestion of the lungs, 2—Inflammation of the lungs, 3—measles, 1—old age, 1—premature birth, 1—puerperal disease, 2—unknown, 7.

Under 5 years of age, 21—between 5 and 20 years, 7—between 20 and 40 years, 14—between 40 and 60 years, 14—above 60 years, 11. Born in the United States, 39—Ireland, 22—other places, 6.